

Remarks:

Responsive to the Official Action mailed July 22, 2003 (which followed a telephone interview with Examiner Parker on July 14 and an Amendment C mailed July 15) in connection with the above- referenced application, Applicant respectfully requests reconsideration, reexamination and allowance of claims 1-6 and 8-21 in view of the following remarks.

First, Applicant would like to thank Examiner Parker for his continued kind consideration and time during prosecution of the instant application and his detailed analysis of the prior art, namely the Leach patent, U.S. Patent No. 5,338,578.

Without belaboring the subject matter of the present application and the Leach patent, in its basic form, the present invention is directed to a method for powder coating a plastic injection molded article. The method includes the steps of preheating the article to a preheating temperature and substantially completely degassing the article. ***The preheating temperature is below a curing temperature of the coating material*** (as more fully discussed below).

The preheated and degassed article is then coated with a polymeric powder coating. The polymeric powder coating has a cross-linking temperature that is above the preheating temperature. Nevertheless, applying the powder coating material to the article at this (somewhat elevated, ***but less than cross-linking or curing temperature***) tends to soften the material to enhance adherence of the powder coating to the preheated and degassed article.

The coated article is then heated to a curing temperature. ***The curing temperature is higher than the preheating temperature*** and is at least 375°F. Further, this curing temperature is between the powder coating cross-linking temperature and the melting point temperature of the article. The method produces a coated and cured, degassed plastic injection molded article. In an alternate, more restrictive and narrower form, the method includes a second cured coating over the first cured coating.

It has been found that the when carried out within the recited (and required) parameters, the present method produces a coated plastic part that exhibits an extremely high level of assurance against bubbling and "orange-peeling".

Examiner Parker relies on Leach, U.S. Patent No. 5,338,578 as the primary reference for

rejecting the present claims. At this point, putting all else aside, Applicant and Examiner Parker disagree as to exactly what Leach does or does not teach with respect to the temperatures at which the powder coating material is applied. Specifically, it is Applicant's position that Leach teaches that the article to be coated is *preheated to a temperature that is above the cross-linking temperature* of the coating material and then the coating material is applied. The Examiner has taken the position that Leach teaches that the temperature at which the material is applied is below the cross-linking temperature so that the material will melt and flow out on the article. The Examiner has also relied on Smith, U.S. Patent No. 5,344,672, as a secondary reference for its teaching of driving out water to provide a smooth coating free of defects.

Returning, however, to the Leach patent, the Examiner has taken the position that Leach must teach application of the powder coating at a temperature below the cross-linking or curing temperature because to do otherwise (i.e., to apply the powder to a sufficiently heated surface) "would inhibit/prevent melting and flowing to form a uniform, smooth surface." Action of July 22, 2003, page 4, lines 12-13. Although the Examiner's position is clearly a tenable one, it is applicant's position that a study of the Leach patent shows that applicant's interpretation of Leach is more fully supported by the text of that patent. More specifically, Applicant submits that Leach teaches heating the article to a temperature above the curing temperature before applying the coating material and that Leach, in its teaching, contemplates *only* heating the article to and above such a temperature.

Leach, at col. 5, lines 54-59 provides that:

If necessary, a second application of the infrared is applied to the powder coating to cure the powder coating to form a film, for example for a period of from about 1 min. to about 8 min., preferably from about 1 min. to about 6 min., and more preferably from about 1 min. to about 4 min.

As stated in Leach, *only if necessary* is a "second application" of infrared is applied to the coated part. Thus, by implication, if a second application is not needed, then curing occurs as a result of the first application of infrared, which first infrared application was prior to the application of the powder coating. Taking this one step further, the part *must* have been heated

to a temperature sufficient to cure the powder prior to application of the powder (by the first application of infrared), otherwise curing would never occur. As such, the Examiner's position that Leach teaches that the temperature at which the material is applied is below the cross-linking temperature so that the material will melt and flow out on the article is misplaced.

Thus, it is Applicant's position that Leach would not have rendered the claimed invention obvious because it expressly teaches (and implicitly contemplates) heating the article to a temperature greater than the curing temperature prior to applying the powder coating.

In addition to this (and without reiterating the arguments), Applicant restates the position that the temperature ranges stated in Leach, and the overlap of these ranges show that there is no lower part of the preheating range that isn't somehow within the curing temperature range. Thus, according to Leach, the preheating temperature range cannot be less than the curing temperature range.

In summary, the tenor of the present invention is that the article is first preheated and then the coating material is applied to the preheated article. It is only after the coating is applied that the article is heated to a curing or cross-linking temperature. The preheating temperature is, as claimed (and by necessity), less than the cross-linking temperature. Thus, curing cannot occur at that temperature. It is only after the coating is applied to the article that the fully coated article is heated to cure the coating material. This, Applicant submits is neither disclosed in nor contemplated by the teachings of the Leach patent, and as such, even in combination with the Smith patent, would not have rendered the claimed invention obvious to one skilled in the art.

In conclusion, applicant respectfully submits that claims 1-6 and 8-21 are in condition for allowance, and such action is earnestly submitted. Applicant believes that there is no fee due in connection with the present Amendment D. If, however, there is a fee due, Applicant authorizes the Commissioner to charge any underpayment, or credit any overpayment, to Deposit Account No. 23-0920. Should any petitions be necessary, applicant requests that this paper constitute any such necessary petition.

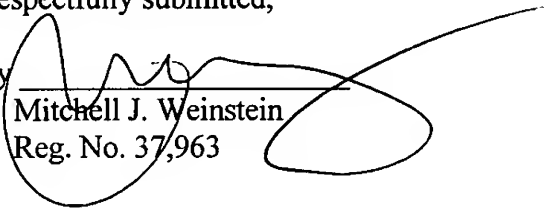
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Art Unit 1762

Amendment D

If Examiner Parker believes that there are issues that could be addressed by a telephone interview, he is invited to contact the undersigned at the below listed number.

Respectfully submitted,

By

  
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